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Intellectual Property Administration  
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## PATENT APPLICATION

ATTORNEY DOCKET NO. 200207945-2

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Maurizio PILU  
Application No.: 10/822,696  
Filing Date: April 13, 2004

Confirmation No.: 2914  
Examiner: Chia Wei A. CHEN  
Group Art Unit: 2622

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Title: ATTENTION DETECTION

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Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEFTransmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on June 26, 2008.☒ The fee for filing this Appeal Brief is \$510.00 (37 CFR 41.20).☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
\$460☐ 3rd Month  
\$1050☐ 4th Month  
\$1640☒ The extension fee has already been filed in this application.☐ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 510. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Typed Name: Allan M. Lowe

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Respectfully submitted,

Maurizio PILU

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Rev 10/07 (AppBrief)

Docket No. 200207945-2 US (1509-487)

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**THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**OCT 02 2008**

In re Application of	
Inventor: Maurizio PILU	: Confirmation No. 2914
U.S. Patent Application No. 10/822,696	: Group Art Unit: 2622
Filed: April 13, 2004	: Examiner: Chia Wei A. CHEN
For: ATTENTION DETECTION	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

**BRIEF ON APPEAL**

Further to the Notice of Appeal filed June 26, 2008, in connection with the above-identified application on appeal, herewith is Appellant's Brief on Appeal. The Commissioner is authorized to charge Deposit Account No. 08-2025 in the amount of \$510 for the statutory fee.

To the extent necessary, Appellant hereby requests any required extension of time under 37 C.F.R. §1.136 and hereby authorizes the Commissioner to charge any required fees not otherwise provided for to Deposit Account No. 08-2025.

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**I. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, L.P., a Texas limited partnership.

**II. Related Appeals and Interferences**

There are no related appeals and/or interferences.

**III. Status of Claims**

**A. Total Number of Claims in Application**

1. There are 59 claims in the application, which are identified as claims 1-59.

**B. Status of all the claims**

1. Claims canceled – 33 and 39
2. Claims withdrawn from consideration but not canceled – None
3. Claims pending – 1-32, 34-38 and 40-59
4. Claims allowed – None
5. Claims rejected – 1-32, 34-38 and 40-59

**C. Claims on Appeal**

1. Claims on appeal are claims 1-32, 34-38 and 40-59

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### **Status of Amendments**

All amendments have been entered all amendments have been entered. There was no amendment after final rejection, except the amendment which was filed on the same day as this Brief and corrects a typographical error noted in the final rejection. Appellant has prepared this Brief in the expectation that the amendment accompanying this brief will be entered.

### **V. Summary of Claimed Subject Matter**

Claim 1 is directed to an attention detection system (title, paragraph 0001) comprising at least one first sensor device 203 (rectangular box illustrated on male figure on left side of Figure 2) for generating a host perspective signal relating to a host wearer 201 (male figure 201 on left side of Figure 2) from the perspective of a host 201 and relating to attention clue signals indicative of the attention of the host wearer 201 to the host perspective signal (paragraph 0043, page 10). At least one second sensor device 204 (rectangular box illustrated on female figure 202 on right side of Figure 2) generates a signal relating to the host wearer 201 from the perspective of an observer 202 (female figure on right side of Figure 2; paragraph 0043, page 10). The signal generated by device 204 relates to said attention clue signals indicative of the attention of the host wearer 201 (paragraph 0043, page 10). A portable attention detector in first sensor device 203 receives the host perspective and the perspective attention clue signals and determines a situation of raised attention (paragraph 0052, penultimate line) of said host wearer 201 from said received host 201 perspective attention clues and said received observer 202 perspective attention clues (paragraph 0046, page 11; paragraph 0021, page 6).

Independent claim 23 relates to a method of capturing images using at least one camera device 204 (the rectangular box on the female figure on the right side of Figure 2; paragraph 0052, last sentence, page 12) or 900 (Figure 9, paragraph 0071). The method includes detecting an attention clue exhibited by at least one first animate object 201 (the male figure on the left side of Figure 2) from the perspective of a host second animate object 202 (the female figure on the right side of Figure 2) carrying

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said at least one camera device 204 (paragraph 0052, page 12). The attention clue is captured by said at least one camera device 204 and indicates the attention of the first animate object 201 is drawn by a subject, such as movement or two-dimensional images (paragraph 0052, page 12). An attention clue 403 of said second animate object 202 is detected from the perspective of an observer 201 external of said second animate object 202 (paragraph 0052, page 12). The at least one camera device 204 is activated so it captures an image of said subject in response to detection of said attention clues of the first and second animate objects (paragraph 0052, page 12).

Independent claim 30 is directed to a method of automatically capturing an image (paragraphs 0047-0050, pages 11 and 12; Figure 3). The method includes detecting at least one attention signal (performed by attention detection module 302; paragraph 0048) in response to a detectable body parameter of at least one animate object (the male figure 201 on the left side of Figure 2). The body parameter is detected by people observing device (POD) 300 (paragraph 0048, page 11). The at least one attention signal is analyzed by attention detection module 302 to determine an interest level of said at least one animate object 201 (paragraphs 0048 and 0049, pages 11 and 12). The analysis is performed in a mode of an observer perspective of said at least one animate object (paragraph 0050, page 12). The image is captured in response to said interest level (paragraphs 0051 and 0052, last three sentences, page 12).

Independent claim 34 relates to an image capture device 700 (Figure 7, paragraphs 0060-0064, pages 15 and 16) comprising an image detector device 703 (paragraph 0060, page 15) for capturing an image. An attention detection component 605 determines an attention signal of a person from a self perspective (paragraph 0057, lines 7, 8, page 14; paragraph 0059, first two sentences, pages 14 and 15; paragraph 0063, pages 15, 16). A transponder device 701 receives activation signals from a remote source (paragraph 0061, page 15). The attention detection component 605 is configured for identifying said activation signals (paragraph 0062, first sentence, page 15; paragraph 0063, pages 15 and 16). An image is captured by image detector device 703 in response to said self perspective activation signal and said received

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activation signal (paragraphs 0061-0063, pages 15 and 16; paragraph 0075, first sentence, page 18; paragraph 0077, first sentence, page 19).

Independent claim 35 is concerned with a device 500 (Figure 5; paragraphs 0053-0056, pages 13, 14) for observing at least one first animate object 202 (for example, the female figure on the right side of Figure 2). Device 500 comprises an interface 507 for interfacing with at least one sensor device for deriving a first signal indicative of an attention state of the first animate object 202 (paragraph 0053, lines 9 and 10, page 13). Interface 507 receives a sensor signal representing aspects of body language of the first animate object 202, which aspects are observed from a position external of said first animate object 202. An example of such a position external of the first animate object is the position of the male figure 201 on the left side of Figure 2. An analyzer, in the form of attention detector 509, determines from said first signal and said sensor signal at least one attention clue related to a second animate object observing the first animate object (paragraph 0053, last two lines, page 13; paragraph 0055, last two lines page 13). An example of the second animate object is the male figure 201 on the left side of Figure 2. A transmitter, in the form of transponder 501, transmits the attention clue signals (paragraph 0053, line 2, page 13; paragraph 0055, lines 1-3, page 13; paragraph 0056, page 14).

Independent claim 38 relates to an attention detection component 600 (Figure 6; paragraphs 0057-0059, pages 14, 15; paragraph 0063, pages 15, 16) for determining a level of attention of at least one animate object, for example, the male figure to the left of Figure 2. The component includes an analyzer 605 (paragraph 0057, lines 7 and 8, page 14) for at least one attention clue signal. The analyzer determines from the attention clue signal, a level of interest of said at least one animate object (paragraph 0058, page 14). The attention detection component 600 is operable for analyzing said attention clues in a self perspective mode, in which said attention clues relate to the at least one animate object. The self perspective mode is defined in paragraph 0018, page 5 as a mode in which a detector device observes situations from the perspective of a host person who is wearing an image capture

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device. In this mode, the device may receive attention clues in the form of sensor signals of parameters of the wearer.

Independent claim 42 defines a computer readable medium storing a computer program for causing a computer (paragraph 0076, page 18) to (1) analyze a plurality of sensor signals (as derived, for example, from sensor 203 worn by the male figure 201 of the left side of Figure 2) representing attention clues collected from a self perspective of a first animate object, for example the male figure 201 on the left side of Figure 2 (paragraph 0043, third sentence, page 10; paragraph 0045, lines 1 and 2, page 10), and attention clues collected from an observed perspective (as derived, for example, from sensor 204 worn by the female figure 202 on the right side of Figure 2) of said first animate object 201 (paragraph 0043, page 10; paragraph 0045, first sentence, page 10), (2) determine from said sensor signals and collected attention clues, a behavioral mode of the first animate object 201 (paragraph 0045, first sentence, page 10); and (3) generate an image capture trigger signal 404 for triggering an image capture device (for example, sensor 203 worn by the male figure 201 on the left side of Figure 2) to capture image data, in response to said sensed behavioral mode of said first animate object 201 (paragraph 0052, penultimate sentence, page 12; paragraph 0061, first sentence, page 15; paragraph 0086, last sentence, page 22).

Independent claim 43 relates to an attention detection system (paragraph 0040, page 9) comprising a portable attention detector 100 (paragraphs 0040 and 0041, page 9) or sensor 203 (paragraphs 0043 and 0044, page 10) for receiving attention clues generated from a self perspective of a host wearer (the male figure of Figure 1 or of Figure 2) of said attention detector 100 or sensor 203. An animate object observing device (paragraph 0041, page 9) or sensor 204 (paragraph 0043, third sentence, page 10; paragraph 0044, penultimate sentence, page 10) observes said host wearer from an observer perspective external of said host wearer. The animate object observing device determines attention clues of said host wearer from said observer perspective externally of said host wearer (paragraph 0041, page 9); paragraph 0045, first sentence, page 10). The attention detector is capable of determining a situation of

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raised attention of said host wearer from said self perspective attention clues, and said received observer perspective attention clues (paragraph 0052, lines 8-15, page 12; paragraph 0083, pages 20, 21).

Independent claim 44 is concerned with a system for detecting the attention level of a first animate object, for example, the male figure on the left side of Figure 2. The system includes a first sensor, for example sensor 100, Figure 1 (paragraph 0040, page 9), or 203 worn by the male figure on the left side of Figure 2, for generating a first signal relating to the attention level of the first animate object 201 from the perspective of the first animate object 201 (paragraph 0043, third sentence, page 10). A second sensor, for example sensor 204 worn by the female figure on the left side of Figure 2, generates a second signal relating to the first animate object from a perspective other than the first animate object (paragraph 0043, last two sentences). A processor (paragraph 0076, page 18) determines that the first animate object 201 has a raised attention level in response to the first and second signals (paragraph 0052, lines 8-15, page 12; paragraph 0083, pages 20, 21).

Independent claim 52 relates to a method of detecting the attention level of a first animate object by sensing the attention level of the first animate object from the perspective of the first animate object (paragraph 0040, page 9; paragraph 0043, third sentence, page 10). A signal relating to the first animate object from a perspective other than the first animate object is generated (paragraph 0043, last two sentences). A determination is made that the first animate object has a raised attention level in response to the sensed attention level and the signal (paragraph 0052, lines 8-15, page 12; paragraph 0083, pages 20, 21).



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## **VI. Grounds of Rejection to be Reviewed on Appeal**

A. The rejection of independent claims 1, 23, 30, 34, 35, 38, 42, 43, 44 and 52 under 35 USC 102(e) as being anticipated by Mann, US 2002/0057915.

## **VII. Argument**

A. The anticipation rejection of all the independent claims is wrong.

The rejection of each of independent claims 1, 30, 34, 35, 38, 42, 43, 44 and 52 relies on the heart rate monitor Mann mentions in paragraph 0168 for: (1) the sensor device of claim 1 for generating a signal relating to a host wearer from a host perspective and relating to attention clue signals indicative of the attention of the host wearer to the host perspective signal; (2) detecting at least one attention signal in response to a detectable body parameter of at least one animate object, as required by claim 30; (3) an attention detection component for determining an attention signal of a person from a self perspective, as required by claim 34 (in the rejection of claim 34, reliance is on processor 150 for determining an attention signal of a person from the heart rate); (4) an interface for interfacing with at least one sensor device, as defined by claim 35; (5) analyzing a plurality of sensor signals representing attention clues collected from a self perspective of a first animate object, as required by claim 42; (6) attention clues generated from a self perspective of a host wearer of an attention detector that receives the attention clues, as set forth in claim 43; (7) a first sensor for generating a first signal relating to the attention level of a first animate object from the perspective of the first animate object, as defined by claim 44; and (8) the step of sensing the attention level of a first animate object from the perspective of the first animate object, as set forth in claim 52. The rejection of independent claim 23 erroneously relies on paragraphs 0203 and 0204 of Mann to disclose detecting an attention clue of a second animate object from an observer perspective external to the second animate object and to disclose activating a camera device so it captures an

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image of a subject in response to detection of attention clues of first and second animate objects. The rejection of independent claim 38 erroneously relies on paragraph 0205 of Mann to disclose analyzing attention clues in a self perspective mode, wherein the attention clues relate to an animate object.

In paragraph 0168 of the Mann reference, an elevated heart rate detected by a heart rate monitor in the brassiere type device illustrated in Figure 3B triggers a camera or microphone to capture images of men who might otherwise be violating the privacy or solitude of the woman wearing the brassiere type device by staring at her or making rude comments. The camera or microphone is located in the brassiere type device and captures images or presumably speech records of such men.

The men mentioned in paragraph 0168 of Mann do not meet the remaining requirements of the independent claims. For example, such a man does not generate a perspective attention signal relating to the host wearer from an observer perspective and relating to the attention clue signals, that is, the increased heart rate signal, as required by claim 1.

The office action, in connection with claim 1, incorrectly relies on Mann at paragraph 0144, that describes the system of Figure 2, to disclose a second sensor for generating a perspective attention signal relating to the host wearer from an observer perspective and relating to the attention clue signals, that is, the elevated heart rate detected by a heart rate monitor in the brassiere type device illustrated in Figure 3B. There is no indication in the relied upon portion of the Mann reference that the elevated heart rate detected by the heart rate monitor is ever sensed from an observer perspective. Paragraph 0142 of the reference indicates images may possibly be transmitted between the safety-charms; such images do not meet the definition set forth in the office action of a sensor device or other similar requirements of applicant's claims that the office action equivocates to the Mann heart rate monitor.

The office action incorrectly relies on paragraph 0101 of Mann to disclose the claim 1 requirement for a portable attention detector for receiving the host perspective signal and the perspective attention clue signal and for determining a situation of

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raised attention of the host wearer from the received host perspective attention clues in the received observer perspective attention clues. Paragraph 0101 of the reference indicates processor 150 receives an input from image capture device 130 and that receiver 140 may also receive data, for example, in the form of pictures, from other nodes in the network. However, there is nothing in the relied on portions of the reference to indicate the elevated heart rate signal is combined with the data from the other nodes in the network to determine a situation of raised attention of the host wearer. As mentioned above, the only function ascribed in Mann to the elevated heart rate signal is to trigger a camera or microphone carried by the brassiere type device. Consequently, claim 1 is not anticipated by Mann.

The discussion of claim 1 in the paragraph bridging pages 2 and 3 of the final rejection alleges "Mann teaches a second sensor device that generates and stores an image signal relating to the host wearer relating to the attention clue signals of the original host." The office action goes on to state claim 1 does not specifically disclose that the attention clues signals must be detected by the second sensor device, only that the second sensor device generates a signal from an observer perspective. With regard to the first point in this discussion, the office action fails to indicate what the second sensor device is and how it meets the requirement for the second sensor device to generate a signal relating to a host wearer from an observer perspective and relating to attention clue signals indicative of the host wearer to the host perspective signal. Concerning the second point in this discussion, sensor sense, that is detect, by definition.

The second full paragraph on page 3 of the final rejection, in connection with the discussion of claim 1, alleges Mann discloses transmission/reception is performed only when a first sensor is triggered by a situation of raised attention. Presumably, this refers to the statements about transmitter 160 and receiver 140 in paragraph 0101. There is nothing in paragraph 0101 about transmission and/or reception being triggered by a situation of raised attention. This paragraph indicates there is occasional sending of pictures by transmitter 160. That is a far cry from transmission and/or reception being triggered by a raised attention situation.

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The issues raised in the third full paragraph on page 3 of the final rejection except for the lack of clarity concerning the definition of "observer perspective" are irrelevant. The definition of "observer perspective" is apparent from the context of claim 1 which states "at least one second sensor device for generating a signal relating to the host wearer from an observer perspective." It is obvious from the statement that the second sensor device observes the host wearer and generates a signal relating to what the second sensor device observes.

The last sentence on page 3 states "it would have been obvious to one of ordinary skill in the art that the man may be wearer of the second sensors." However, the rejection of claim 1 is based on anticipation, so that the issue of obviousness is inappropriate.

Independent claim 23 is not anticipated by paragraphs 0203 and 0204 of Mann because the claim requires (1) detecting an attention clue of a second animate object from an observer perspective external to the second animate object, and (2) at least one camera device to be activated so it captures an image of a subject in response to detection of attention clues of first and second animate objects. Paragraph 0203 indicates camera 310, in a backpack based apparatus 600, provides a video signal to processor 650, which controls a pan-tilt camera mount 320 to which camera 310 is fitted. A video motion detector, presumably in processor 650, senses motion of a potential assailant coming up behind the wearer of apparatus 600. The processor is used to factor out movement of the wearer so residual movement of assailant 602A can be used to trigger video capture of the assailant.

Based on the foregoing, the potential assailant would be interpreted as the first animate object of claim 23 and the host second animate object of claim 23 would be interpreted as the wearer. The attention clue captured by camera 310 is the movement of the assailant coming up behind the wearer. The subject of claim 23 would be interpreted as the wearer.

Using this interpretation, the rejection of claim 23 is erroneous because camera 310 is activated so it captures an image of the first animate object, that is, the

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assailant, rather than the wearer, which is interpreted as the subject. In addition, camera 310 is activated so it captures an image of the assailant only in response to detection of the movement of the assailant, rather than in response to detection of attention clues of the assailant and the wearer. Detection of the movement of the wearer has nothing to do with activating camera 310 because the movement of the wearer is factored out and only the residual movement of the assailant triggers video capture. In other words, the requirement of claim 23 for activating a camera device so it captures an image of said subject in response to detection of attention clues of the first and second animate objects is not found in paragraphs 0203 and 0204 of Mann.

Independent claim 30 distinguishes over Mann by requiring an analysis to be performed in a mode of an observer perspective of the at least one animate object. In the office action, paragraphs 0168 and 0169 of Mann were relied on for the feature of performing the analysis in a mode of an observer perspective of the at least one animate object and heart rate was indicated to be an attention signal that is responsive to a detectable body parameter of at least one animate object. Hence, the at least one animate object is being interpreted as the female wearer of the apparatus that captures images of men. In consequence, in paragraphs 0168 and 0169 there is no analysis performed in a mode of an observer perspective, that is, there is no analysis of the heart rate of the female wearer by the man. The camera is activated solely in response to heart rate of the female wearer.

The discussion in the second paragraph on page 4 of the final rejection, relating to claim 30, states "it would have been obvious to one of ordinary skill in the art that the mode of a observer perspective may be a perspective of a second sensor." Because claim 30 is rejected on anticipation, the issue of obviousness is inappropriate.

Independent claim 34 is not anticipated because it requires a transponder device for receiving activation signals from a remote source, wherein attention detecting components for determining an attention signal of a person from a self perspective is configured for identifying the activation signals. An image is required to be captured in response to the self perspective activation signal and the received activation signal.

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The analysis set forth in the office action apparently relies on the disclosure of receiver 140 in paragraph 0101 to meet the requirement of claim 34 for a transponder device for receiving activation signals from a remote source. Paragraph 0101 indicates receiver 140 may receive data, for example in the form of pictures, from other nodes of a Witnessential Network. However, there is no indication that the data which receiver 140 receives has anything to do with activating capture of an image in response to both a self perspective activation signal, that is, the heart rate signal, and the data that receiver 140 receives.

The fourth paragraph on page 4 of the final rejection refers to paragraphs 0105 and 0106 of Mann and states the reference discloses a remote node of a safety charm receives an image signal and captures and stores the image signal. This has nothing to do with the requirements of claim 34.

Independent claim 35 distinguishes over Mann by requiring an analyzer for determining from a first signal indicative of an attention state of a first animate object and a sensor signal representing aspects of body language of the first animate object, as observed from a position external of the first animate object and at least one attention clue related to a second animate object and observing the first animate object. The office action has equated the claimed sensor device with the heart monitor of Mann. However, Mann has no disclosure of an analyzer for determining, from the monitored heart rate and a sensor signal related to a second animate object observing the first animate object, at least one attention clue related to a second animate object observing the first animate object. The attention clue is derived only from the heart rate signal.

Claim 35 also distinguishes over Mann by requiring an analyzer for determining an attention clue related to a second animate object observing a first animate object from a first signal indicative of an attention state of the first animate object and a sensor signal representing aspects of body language of a first animate object, as received by a receiver for the sensor signal. The office action erroneously relies on receiver 140 and processor 150, paragraph 0101, for the foregoing features.

Paragraph 0101 merely indicates receiver 140 receives data from other nodes of a

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network and that the data may include pictures. There is no indication that the data receiver 140 receives has anything to do with representing aspects of body language of the female whose heart rate is being monitored, that is, the first animate object.

Independent claim 38 is not anticipated by Mann because the office action, in connection with the rejection of claim 38, inaccurately states paragraph 0205 of Mann discloses analyzing attention clues in a self perspective mode, wherein the attention clues relate to an animate object. Apparently, the examiner has interpreted the potential assailant discussed in paragraphs 0204 and 0205 as the "at least one animate object" of claim 38 and the movement of the potential assailant as the attention detection components of claim 38. However, there is no analysis of the movement of the potential assailant in a self perspective mode in paragraph 0205 which merely indicates a radar system, a microwave motion detector or gunnplexer 610 in the backpack detects certain movement signature patterns of the assailant. Consequently, paragraph 0205 of Mann does not meet the requirement of claim 38 for analyzing said attention clues in a self perspective mode.

The discussion of claim 38 in the last paragraph on page 4 of the final rejection states it would have been obvious to apply the heart rate monitor in one Mann embodiment with a camera in another Mann embodiment. This discussion is inappropriate because claim 38 is rejected on anticipation.

Claim 42 distinguishes over the relied upon portion of Mann, that is, paragraph 0168, by requiring a behavioral mode of a first animate object to be determined from analyzed plural sensor signals representing attention clues collected from the self perspective of a first animate object and attention clues collected from an observed perspective of the first animate object. In Mann, the behavioral mode of the first object (that is, the anxiety level of a woman) is indicated only by the monitored heart rate signal. There is no disclosure of determining a behavioral mode of the woman from analyzed plural sensor signals representing the attention clues collected from the self perspective of the woman and attention clues collected from the observed perspective of the woman.

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The rejection of claim 43 incorrectly relies on camera 310 of Mann to be an animate object observing device for observing a host wearer of an attention detector from an observer perspective external of the host wearer and determining attention clues of the host wearer from the observer perspective externally of the host wearer. Because camera 310 merely provides an image of the man gazing at the woman, camera 310 cannot be considered an animate object observing device for (1) observing a host wearer of an attention detector from an observer perspective external of the host wearer and (2) determining attention clues of the host wearer from the observer perspective externally of the host wearer.

The statement regarding claim 43 in the second paragraph on page 5 of the final rejection is in error. The backpack is worn by the woman, which this paragraph states is a first animate object. There is no disclosure by Mann of the assailant wearing a backpack.

In the rejection of claim 44, the office action relies on the heart monitor feature of paragraph 0168 and states camera 310 reads on the claimed second sensor. However, camera 310 does not generate a second signal relating to the first animate object, that is, the woman, from a perspective other than the first animate object because camera 310 merely monitors the image of the man who is gazing at the woman. The office action also relies on processor 650 in backpack 600 for determining that the first animate object, that is the woman, has a raised attention level in response to the heart rate signal and the signal from camera 310. This reliance on processor 650 is wrong because processor 650 is not responsive to the heart rate signal, and makes no determination with regard to the first animate object, that is, the woman. Concerning the latter point, processor 650 merely provides information concerning a view that is behind the wearer of backpack 600; see the last sentence of paragraph 0202.

The fourth paragraph on page 5 of the final rejection, in connection with claims 44 and 52, alleges the woman is a first animate object and therefore infers another animate object is the assailant. However, the woman, not the assailant, wears the backpack.



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Claim 52 is not anticipated by Mann because the reference does not determine that a first animate object has an attention level that is sensed from the prospective of the first animate object and from a perspective other than the first animate object. In other words, claim 52 is not anticipated by Mann for the same reasons discussed in connection with the rejection of claim 44.

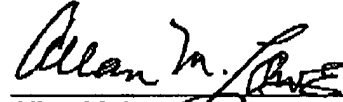
The dependent claims are allowable for the same reasons advanced for the claims upon which they depend. The secondary references do not cure the deficiencies in the rejections of the independent claims.

Reversal of the rejection is in order.

Respectfully submitted,

Lawrence WILCOCK et al.

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August 26, 2008  
AML/cjf

Docket No. 200207945-2 US (1509-487)

PATENT**Claims Appendix****RECEIVED  
CENTRAL FAX CENTER****OCT 02 2008****1. An attention detection system comprising:**

at least one first sensor device for generating a host perspective signal relating to a host wearer from a host perspective and relating to attention clue signals indicative of the attention of the host wearer to the host perspective signal; and

at least one second sensor device for generating a signal relating to the host wearer from an observer perspective and relating to said attention clue signals; and

a portable attention detector for receiving the host perspective and the perspective attention clue signals and for determining a situation of raised attention of said host wearer from said received host perspective attention clues and said received observer perspective attention clues.

**2. The attention detection system as claimed in claim 1, wherein said at least one sensor device comprises:**

an image capture device for capturing an image from the self-perspective of said host wearer in response to a determined situation of raised attention.

**3. The system as claimed in claim 1, wherein said at least one first sensor device is adapted to be worn by said host wearer.****4. The system as claimed in claim 1, wherein said at least one second sensor device is adapted to be worn by a wearer other than the host wearer.****5. The system as claimed in claim 1, wherein said at least one second sensor device is adapted to be located in a place where said host user is likely to be.**

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6. The system as claimed in claim 1, further comprising a people-observing device for communicating with said attention detector.

7. The system as claimed in claim 6, further comprising a plurality of the people-observing devices, each of which is capable of:

communicating with said attention detector; and

communicating with each other.

8. The system as claimed in claim 6, wherein at least one of the people-observing devices comprises a camera device.

9. The system as claimed in claim 1 further comprising first and second user-observing devices including beacons for locating and detecting the host wearer and the observer.

10. The system as claimed in claim 1 wherein the portable attention detector and the at least one first sensor device are integrated into a host wearable device.

11. The system as claimed in claim 1, further comprising a people-observing device for communicating with said attention detector, wherein said people-observing device is configurable for cooperating with at least one other people-observing device for communicating information with said at least one other people-observing device.

12. The system as claimed in claim 1, further comprising a people-observing device for communicating with said attention detection module, wherein said people-observing device is configurable for recognizing at least one other people-observing device to form a group of people-observing devices capable of recognizing each other.

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13. The system as claimed in claim 12, wherein said people-observing device can be set to communicate or not communicate with at least one other people-observing device based on an analysis of contextual information relating to the host user.

14. The system as claimed in claim 1, further comprising a people-observing device that can be set to selectively communicate with at least one other people-observing device based on an analysis of a type of attention clue detected.

15. The system as claimed in claim 1, further comprising at least one people-observing device that can be set to selectively communicate with said attention detector depending upon the type of attention clue detected.

16. The system as claimed in claim 1, wherein at least one of the first sensor device and the second sensor device comprises a digital camera device for capturing a digital image.

17. The system as claimed in claim 1, wherein the at least one second sensor device is arranged for detecting a facial expression of said host wearer and for generating the perspective attention signal based on the detected facial expression of said host wearer.

18. The system as claimed in claim 1, wherein the at least one second sensor device is arranged for detecting an eye direction of said host wearer and for generating the perspective attention signal based on the detected eye direction of said host wearer.

19. The system as claimed in claim 1, wherein the at least one second sensor device is arranged for detecting body language of said host wearer and for generating the perspective attention signal based on the detected body language of said host wearer.

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20. The system as claimed in claim 1, wherein the at least one second sensor device is arranged for detecting body posture of the host wearer and for generating the perspective attention signal based on the detected body posture of the host wearer.

21. The system as claimed in claim 1 wherein the first sensor device or the second sensor device or both sensor devices include a detector for the context of an environment where said host wearer is located, the host attention signal or the perspective attention signal or both the attention and perspective signals, as appropriate, being dependent on the context of the environment where said host wearer is located.

22. The system as claimed in claim 1 wherein the first sensor device or the second sensor device or both sensor devices include a vocal utterance detector of the host wearer, the host attention signal or the perspective attention signal or both the attention and perspective signals, as appropriate, being dependent on the vocal utterance detector of the host wearer.

23. A method of capturing images using at least one camera device, said method comprising:

detecting an attention clue exhibited by at least one first animate object from the perspective of a host second animate object carrying said at least one camera device, said attention clue being captured by said at least one camera device and indicating that the attention of the first animate object is drawn by a subject;

detecting an attention clue of said second animate object from an observer perspective external of said second animate object;

activating said at least one camera device so it captures an image of said subject in response to detection of said attention clues of the first and second animate objects.

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24. The method as claimed in claim 23, wherein said step of detecting an attention clue exhibited by the at least one animate object comprises detecting a facial expression of said at least one first animate object.

25. The method as claimed in claim 23, wherein said step of detecting an attention clue exhibited by the at least one animate object comprises detecting an eye direction of said at least one first animate object.

26. The method as claimed in claim 23, wherein said step of detecting an attention clue exhibited by the at least one animate object comprises detecting body language of said at least one first animate object.

27. The method as claimed in claim 23, wherein said step of detecting an attention clue exhibited by the at least one animate object comprises detecting body posture of said at least one first animate object.

28. The method as claimed in claim 23, wherein said step of detecting an attention clue exhibited by the at least one animate object comprises detecting a vocal utterance of said at least one first animate object.

29. The method as claimed in claim 23, wherein the detecting step of the attention clue of said second animate object comprises:

capturing an image from the perspective of the observer external to the second animated object; and

performing image processing of said image so there is detected an attention clue of said second animate object, the detected image of the attention clue of the second animate object being selected from the set including:

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- a facial expression;
- an eye direction;
- a body movement; and
- a body posture.

30. A method of automatically capturing an image, said method comprising:

detecting at least one attention signal in response to a detectable body parameter of at least one animate object;

analyzing said at least one attention signal to determine an interest level of said at least one animate object, said analysis being performed in a mode of an observer perspective of said at least one animate object; and

capturing said image in response to said interest level.

31. The method as claimed in claim 30 further comprising; determining a situational saliency of a scene by analyzing said at least one attention signal.

32. The method as claimed in claim 31, wherein said analysis is performed in a mode of self perspective of said animate object.

34. An image capture device comprising: an image detector device for capturing an image; an attention detection component for determining an attention signal of a person from a self perspective; a transponder device for receiving activation signals from a remote source; said attention detection component being configured for identifying said activation signals, and activating capture of an image in response to said self perspective activation signal and said received activation signal.

35. A device for observing at least one first animate object, comprising:

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an interface for interfacing with at least one sensor device for deriving a first signal indicative of an attention state of the first animate object;

a receiver for a sensor signal representing aspects of body language of the first animate object, the aspects being observed from a position external of said first animate object; and

an analyzer for determining from said first signal and said sensor signal at least one attention clue related to a second animate object observing the first animate object; and

a transmitter for transmitting the attention clue signals.

36. The device as claimed in claim 35, further comprising: a transponder device adapted to be carried by the first animate object for transmitting said sensor signals to a location displaced from the first animate object.

37. The device as claimed in claim 35, wherein the sensor signal receiver includes:

an image capture device for capturing image frames including aspects of the body language of the first animate object.

38. An attention detection component for determining a level of attention of at least one animate object, said component comprising:

an analyzer for (a) at least one attention clue signal, and (b) determining from said attention clue signal, a level of interest of said at least one animate object, the attention detection component being operable for analyzing said attention clues in a self perspective mode, in which said attention clues relate to the at least one animate object.

40. The attention detection component as claimed in claim 38, the component being



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operable in an observer perspective mode, in which said attention clues represent signals describing behavior of an animate object observed from a remote location.

41. The attention detection component as claimed in claim 38, comprising a transponder device for receiving said attention clue signals from a remote sender device.

42. A computer readable medium storing a computer program for causing a computer to perform steps comprising:

analyzing a plurality of sensor signals representing attention clues collected from a self perspective of a first animate object, and attention clues collected from an observed perspective of said first animate object, and determining from said sensor signals and collected attention clues, a behavioral mode of the first animate object; and

generating an image capture trigger signal for triggering an image capture device to capture image data, in response to said sensed behavioral mode of said first animate object.

43. An attention detection system comprising: a portable attention detector for receiving attention clues generated from a self perspective of a host wearer of said attention detector; an animate object observing device for observing said host wearer from an observer perspective external of said host wearer and determining attention clues of said host wearer from said observer perspective externally of said host wearer; said attention detector being capable of determining a situation of raised attention of said host wearer from said self perspective attention clues, and said received observer perspective attention clues.

44. A system for detecting the attention level of a first animate object comprising: a first sensor for generating a first signal relating to the attention level of the first animate

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object from the perspective of the first animate object; a second sensor for generating a second signal relating to the first animate object from a perspective other than the first animate object; and a processor for determining that the first animate object has a raised attention level in response to the first and second signals.

45. The system of claim 44 wherein the second sensor is arranged to respond to a parameter indicative of the attention being paid to the first animate object by a second animate object.

46. The system of claim 45 wherein the first and second sensors are adapted to be carried by the first animate object.

47. The system of claim 46 wherein the second sensor comprises an image detector adapted to be responsive to at least a portion of an image of the second animate object.

48. The system of claim 45 wherein the first and second sensors are respectively adapted to be carried by the first and second animate objects.

49. The system of claim 48 wherein the second sensor is connected to a transmitter (a) adapted to be carried by the second animate object, and (b) arranged to transmit the second signal from the second animate object to the first animate object.

50. The system of claim 44 wherein the second sensor is arranged to respond to a parameter indicative of the reaction of the first animate object to the environment where the first animate object is located.

51. The system of claim 50 wherein the second sensor is adapted to be located at a

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position removed from the first animate object, and further comprising a transmitter arranged to transmit the second signal from said position to a receiver (a) arranged to receive the second signal, and (b) adapted to be carried by the first animate object.

52. A method of detecting the attention level of a first animate object comprising: sensing the attention level of the first animate object from the perspective of the first animate object; generating a signal relating to the first animate object from a perspective other than the first animate object; and determining that the first animate object has a raised attention level in response to the sensed attention level and the signal.

53. The method of claim 52 wherein the signal is generated in response to a parameter indicative of the attention being paid to the first animate object by a second animate object.

54. The method of claim 53 wherein the sensor is carried by the first animate object.

55. The method of claim 54 wherein the sensor comprises an image detector responsive to at least a portion of an image of the second animate object.

56. The method of claim 53 wherein the first and second sensors are respectively carried by the first and second animate objects.

57. The method of claim 56 further comprising transmitting the second signal from the second animate object to the first animate object.

58. The method of claim 52 wherein the second sensor responds to a parameter

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indicative of the reaction of the first animate object to the environment where the first animate object is located.

59. The method of claim 58 wherein the second sensor is located at a position removed from the first animate object, and further comprising transmitting the second signal from said position to a receiver that receives the second signal and is carried by the first animate object.

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**Evidence Appendix**

**None.**

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**Related Proceedings Appendix**

**None.**